What is Claimed Is:

1. An apparatus for generating a two dimensional histological map of a cervix from a 3-dimensional hyperspectral data cube generated by scanning the cervix comprising:

an input processor constructed to:

normalize fluorescence spectral signals collected from the hyperspectral data cube,

extract pixel data from the spectral signals that is indicative of cervical tissue classification, and

compress the extracted pixel data;

a classifier in communication with said input processor that assigns a tissue classification to the pixel data; and

an image processor in communication with said classifier that generates a two dimensional image of the cervix from the pixel data, said two dimensional image including color-coded regions representing specific tissue classifications of the cervix.

2. An apparatus for generating a two dimensional histological map of a cervix from a 3-dimensional hyperspectral data cube generated by scanning the cervix comprising:

means for normalizing fluorescence spectral signals collected from the hyperspectral data cube;

means for extracting pixel data from the spectral signals, the pixel data being indicative of cervical tissue classification;

means for compressing the extracted pixel data;

means for assigning tissue classifications to the compressed data; and

means for generating a two dimensional image of the cervix from the compressed data, the two dimensional image including color-coded regions representing specific tissue classifications of the cervix.

3. A method for generating two dimensional image of a cervix from a three dimensional hyperspectral data cube generated by scanning the cervix, comprising:

normalizing fluorescence spectral signals collected from the hyperspectral data cube;

extracting pixel data from the spectral signals, the pixel data being indicative of cervical tissue classification;

compressing the extracted pixel data;

assigning tissue classifications to the compressed data; and

generating a two dimensional image of the cervix from the compressed data, the two dimensional image including color-coded regions representing specific tissue classifications of the cervix.

4. An article of manufacture comprising:

a computer usable medium having computer program code embodied therein for generating a two dimensional image of a cervix from a three dimensional hyperspectral data cube including:

a program code segment for causing a computer to normalize fluorescence spectral signals collected from the hyperspectral data cube;

a program code segment for causing the computer to extract pixel data from the spectral signals, the pixel data being indicative of cervical tissue classification;

a program code segment for causing the computer to compress the extracted pixel data;

a program code segment for causing the computer to assign tissue classifications to the compressed data; and

a program code segment for causing the computer to generate a two dimensional image of the cervix from the compressed data, the two dimensional image including color-coded regions representing specific tissue classifications of the cervix.